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Implementation Strategies of Carbon Neutral Events at Pertamina Group - A Qualitative Study of Organization Practices

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Abstract *- This study explores the implementation strategies of carbon neutral events within Pertamina Group, employing the Greenomina platform as carbon calculator for sustainable organizational practices. As environmental concerns escalate, the need for corporations to adopt carbon-neutral initiatives has become imperative. Through a qualitative methodology, including in-depth interviews and document analysis, this research investigates how Pertamina operationalizes carbon neutrality during its corporate events. Findings highlight key strategies involving stakeholder engagement, carbon footprint assessment, waste reduction, and the use of renewable energy. The Greenomina platform serves as a critical lens for analyzing these practices and their alignment with global sustainability standards. This research contributes to the growing body of knowledge on green event management and offers practical insights for corporations aiming to integrate environmental responsibility into their core activities.*

Keywords *- Carbon Neutrality, Greenomina Platform, Sustainable Events, Digital Transformation, Green Practices*

I. INTRODUCTION

Climate change poses significant challenges for governments, businesses, and societies worldwide. The corporate sector, as a major contributor to greenhouse gas (GHG) emissions, plays a crucial role in mitigating environmental impact. In this context, carbon neutral events—those that measure, reduce, and offset GHG emissions—have emerged as a pivotal strategy in corporate sustainability [1]. Pertamina Group, a leading Indonesian state-owned energy company, has taken progressive steps toward environmental stewardship through various sustainability initiatives including scope 3 emission reductions [2].

Organizations are increasingly held accountable for the full spectrum of greenhouse gas (GHG) emissions, including Scope 3, which covers indirect emissions from value chain activities such as travel, logistics, procurement, and product usage. This has made mitigating climate change a global priority. According to the GHG Protocol, while Scope 3 often represents the largest portion of a company's total emissions, its measurement and control are challenging due to limited data availability and external dependencies [3]. This complexity underscores the urgent need for innovative solutions that go beyond traditional reporting frameworks.

Digital transformation has significantly enhanced the ability to track and report carbon emissions. Corporate sustainability systems are increasingly incorporating technologies like blockchain, cloud platforms, IoT, and machine learning to support emission reduction strategies, automate data collection, and improve the accuracy of carbon accounting [4]. Digital platforms are essential for enabling stakeholder accountability and real-time tracking of GHG emissions, particularly for managing Scope 3 operations which part of aggressive low carbon innovation [5]. In high-emission sectors like oil and gas, the shift to data-driven platforms represents a strategic move toward more measurable and verifiable sustainable practices [6].

As companies increasingly acknowledge the importance of addressing climate change, their role in reducing greenhouse gas emissions becomes more vital [7]. In particular, the energy sector's transition to sustainable practices is critical for achieving long-term environmental goals [8]. Pertamina, a key player in Indonesia's energy market, has pioneered sustainability efforts, not only through its commitment to reducing emissions but also by integrating innovative digital solutions [9]. This platform enables the company to accurately calculate and offset emissions from its corporate events, a key component

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of its broader sustainability strategy. The Greenomina initiative aligns with global efforts to provide sustainable energy and reduce carbon footprints, offering a model for other companies to adopt similar practices.

As a state-owned enterprise, Pertamina plays a strategic role in supporting national goals by integrating carbon neutrality into its operations. Events held by Pertamina, including internal meetings, and community engagements, are increasingly designed with carbon-conscious principles. These events serve as public demonstrations of the company's environmental values and commitments [10].

Moreover, the introduction of digital platforms such as Greenomina signifies a paradigm shift in how organizations measure and manage environmental impacts. Unlike traditional event planning systems, Greenomina offers end-to-end tools for lifecycle assessment, stakeholder coordination, carbon accounting, and sustainability reporting. By embedding this platform into its event strategy, Pertamina is not only responding to internal sustainability goals but also to external pressures from stakeholders, investors, and regulatory bodies.

This research focuses on the implementation strategies employed by Pertamina to organize carbon neutral events using the Greenomina platform. Greenomina, a structured digital solution integrating environmental management principles, provides a systematic guideline for calculation emission for green events. Understanding Pertamina's approach offers valuable lessons for similar organizations aiming to align corporate practices with sustainability goals.

The significance of this research lies in its ability to explore how a large, state-owned enterprise operationalizes sustainability through practical event-based actions. By analyzing Pertamina's strategies using a qualitative approach, the study provides empirical insights into organizational behavior, leadership commitment, and policy implementation in the context of environmental governance.

II. LITERATURE REVIEW

A. Carbon Neutrality & Carbon Offset

Carbon neutrality in the context of corporate events refers to a balance between greenhouse gas emissions generated and those offset through environmental mitigation strategies. Events typically involve travel, accommodation, catering, and materials that contribute to carbon emissions. Scholars have highlighted that effective carbon neutral events depend on comprehensive planning, carbon accounting, and credible offsetting mechanisms [1]. Event organizers often employ carbon calculators and offset registries to ensure transparency and accountability.

A significant body of literature has emphasized the role of corporations in advancing carbon neutrality as part of environmental, social, and governance (ESG) commitments. In particular, events serve as high-visibility platforms where sustainability goals can be enacted and communicated to stakeholders [11]. The adoption of carbon neutral strategies during events allows organizations to demonstrate alignment with international climate agreements, such as the Paris Agreement.

Furthermore, carbon neutrality is increasingly being seen as a reputational asset. Organizations that consistently integrate climate considerations into event planning gain strategic advantages in stakeholder relations, investor confidence, and regulatory compliance [12]. These developments make carbon neutral events a cornerstone of broader corporate sustainability agendas.

B. Green Event Management

Green event management (GEM) refers to the integration of environmental practices into all stages of event planning and execution. Key practices include reducing energy consumption, promoting sustainable transportation, minimizing waste, and selecting eco-certified venues [13]. The GEM approach aligns with the circular economy model, emphasizing resource efficiency and waste minimization.

Studies have shown that successful GEM implementation depends on organizational commitment, cross-functional coordination, and the use of digital tools to monitor sustainability metrics [14]. For instance, organizations may develop checklists, green procurement policies, and training modules to embed sustainability in their event culture.

Moreover, GEM contributes to positive branding and stakeholder engagement. Events that visibly demonstrate green practices attract environmentally conscious participants and enhance the company's public image [15] The literature also identifies barriers such as cost, complexity, and lack of expertise, which require targeted strategies to overcome.

C. Digital Transformation

Digital transformation refers to the integration of digital technologies into all areas of a business, fundamentally changing how organizations operate and deliver value to customers. In the context of sustainability, digital transformation has become a crucial driver in enhancing the tracking and reporting of carbon emissions. By adopting technologies such as blockchain, cloud platforms, the Internet of Things (IoT), and machine learning, corporate sustainability systems can improve emission reduction strategies,

automate data collection, and enhance the accuracy of carbon accounting. These advancements not only allow organizations to reduce their environmental impact but also help them achieve greater transparency and precision in managing their carbon footprint [4].

The role of digital platforms extends beyond just managing direct emissions, particularly in addressing Scope 3 emissions, which represent indirect emissions across the value chain. Digital systems enable real-time tracking and better accountability, making them essential for managing these complex emissions. The transition to data-driven platforms is particularly important in high-emission industries such as oil and gas, where the use of digital tools supports the shift towards more measurable and verifiable sustainable practices. By leveraging these technologies, organizations can adopt aggressive low-carbon innovation strategies that foster long-term sustainability goals while ensuring more reliable environmental reporting [16].

D. Organizational Sustainability Practices

Organizational sustainability practices encompass policies, operations, and cultural norms that prioritize long-term environmental, social, and economic outcomes. Within the context of events, these practices include green logistics, energy-efficient infrastructure, waste diversion, and responsible sourcing [17].

A review of corporate sustainability literature reveals that leadership commitment, stakeholder collaboration, and performance incentives are critical enablers of sustainable practices [1]. Organizations that integrate sustainability into their strategic planning are more likely to achieve systemic improvements in resource efficiency and stakeholder satisfaction.

Sustainability practices also support risk mitigation. By adopting environmentally responsible behaviors, firms can reduce exposure to regulatory penalties, supply chain disruptions, and reputational harm [13]. Events serve as microcosms for implementing and testing sustainability innovations that can be scaled across the enterprise.

III. METHODOLOGY

A. Methodology

This research employs a qualitative case study approach to explore the implementation strategies of carbon-neutral events by Pertamina Group using the Greenomina platform. The qualitative method is appropriate for examining organizational practices in depth and for understanding the complex interplay of environmental, technological, and managerial elements involved in sustainable event planning. By focusing on the lived experiences and perspectives of key stakeholders, the study seeks to provide rich, contextual insights into sustainability integration within corporate events.

Data collection was conducted through semi-structured interviews with five organizations involved in Pertamina's event ecosystem. These included Pertamina's sustainability strategy division, Pertamina's sustainability program division, Pertamina's technology acceleration, the Greenomina development team, and Mitra tour. The selection of these organizations was based on their direct involvement in either the strategic planning or operational execution of carbon-neutral events within Pertamina Group.

The interviews were conducted over a one-month period using a purposive sampling method. Each session lasted approximately 60 minutes and was guided by a thematic protocol covering planning processes, sustainability metrics, technology adoption, and stakeholder engagement. Interviews were audio-recorded with participant consent and transcribed verbatim for analysis. Supplementary data, including event reports, sustainability documentation, and Greenomina system outputs, were also collected to triangulate the interview findings. This triangulation approach was used to strengthen both the validity and reliability of the findings, adhering to best practices in qualitative research methods [18].

Data were analyzed using thematic coding to identify recurring patterns and insights. Thematic categories were derived both inductively from the data and deductively based on existing literature. This approach ensured analytical rigor and allowed for the identification of nuanced implementation strategies across the different organizational perspectives. Findings from the analysis are presented in the subsequent section and are discussed in relation to the theoretical constructs introduced in the literature review.

IV. FINDINGS AND DISCUSSION

The findings reveal five key implementation strategies that characterize Pertamina Group's approach to carbon-neutral events: stakeholder integration, carbon footprint assessment, digital sustainability monitoring, waste minimization, and post-event evaluation. These strategies demonstrate Pertamina's alignment with international sustainability frameworks and the increasing role of technology in supporting environmental governance.

First, stakeholder integration emerged as a foundational strategy. Interviews emphasized that cross-sectoral collaboration—including coordination with government agencies, vendors, and platform providers—was crucial to achieving sustainability

targets. This aligns with findings from Getz and Page [11], who emphasize the importance of multistakeholder engagement in green event execution. Pertamina's internal sustainability team played a central role in aligning diverse organizational units around a shared carbon neutrality agenda.

Second, carbon footprint assessment was consistently highlighted as a starting point for planning. The use of Greenomina enabled data-driven calculation of emissions across transportation, energy use, and materials. According to Fitriastuti & Sunitiyoso [9], accurate emissions tracking enhances accountability and guides decision-making toward more sustainable options. The Greenomina platform allowed Pertamina to model different emission scenarios and prioritize interventions.

Third, digital sustainability monitoring, facilitated through Greenomina, supported real-time tracking and post-event reporting. Respondents noted that dashboards within the platform provided visualizations of key environmental performance indicators (EPIs), enabling continuous improvement. This finding is consistent with the literature on smart event systems [19], which argues that digital platforms improve transparency and facilitate iterative learning.

Fourth, waste minimization strategies were integrated into event logistics. Interviewees described efforts such as sourcing biodegradable materials, implementing reusable infrastructure, and limiting single-use plastics. These practices correspond with recommendations by Laing and Frost [13], who highlight waste management as a core domain in green event frameworks. Furthermore, vendor contracts included environmental clauses to ensure compliance with Pertamina's sustainability goals.

Lastly, post-event evaluation was institutionalized through sustainability reports and third-party audits. Pertamina conducted debriefings with internal and external stakeholders, using Greenomina data to reflect on performance gaps and opportunities. This practice resonates with Mair and Laing's [1] assertion that continuous evaluation is essential for evolving best practices and embedding sustainability in corporate culture.

Overall, the discussion highlights that technology-enabled, multi-stakeholder strategies such as those employed by Pertamina are increasingly viewed as necessary for carbon-neutral event management in emerging economies. Pertamina's case illustrates how state-owned enterprises can lead in environmental innovation by operationalizing digital sustainability tools and aligning internal structures around clear climate objectives.

Referring to last 5 events in Pertamina (EcoRunFest 2024, HR & Business Support PPN 2025 meeting, PMC Town Hall Meeting, PertamaxTurbo Turnament 2024, Sedayu Tournament 2024), Pertamina group has offset 1.660 ton CO2e emission [20] and it creates revenue for Pertamina NRE about 100 million IDR during 6 (six) months.

Based on those findings, we come up with 5 strategies for implementation of carbon neutral events at Pertamina group using Greenomina as per below:

Table I Implementation Strategies

No	Strategy	Description
1.	Stakeholder Engagement	Pertamina emphasizes collaboration with stakeholders, including vendors, government agencies, and local communities. Early involvement ensures shared commitment to sustainability objectives. Interviewees noted that engaging suppliers on green procurement was critical to event success.
2.	Carbon Footprint Assessment	Each event includes a pre-assessment of potential carbon emissions. Pertamina uses carbon calculators to estimate GHG outputs, guiding decisions on transportation, accommodation, and materials. Events often feature low-carbon options such as digital invitations and virtual attendance.
3.	Digital Sustainability Tool	Pertamina utilizes Greenomina as a digital sustainability tool to track individual carbon emissions or event carbon emissions. Participants highlighted the usage of Greenomina to promote attendee awareness.
4.	Waste Reduction and Management	Pertamina implements strict waste management protocols, including recycling stations, composting organic waste, and eliminating single-use plastics. Participants highlighted educational campaigns during events to promote attendee awareness.
5.	Evaluation and Reporting	Post-event evaluations measure success against sustainability indicators. Lessons learned are integrated into future event planning. Transparency through public sustainability reporting reinforces accountability.

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emerging economies. Pertamina's case illustrates how state-owned enterprises can lead in environmental innovation by operationalizing Greenomina as digital sustainability tools and aligning internal structures around clear climate objectives.

V. CONCLUSION

This study concludes that Pertamina Group's implementation of carbon-neutral event strategies through the Greenomina platform represents a significant advancement in sustainable corporate practices. The integration of digital tools for emissions monitoring, stakeholder collaboration, waste reduction, and continuous evaluation reflects a holistic and proactive approach toward environmental accountability. The findings underscore the importance of embedding sustainability into the core operational and strategic layers of event planning.

By leveraging Greenomina, Pertamina demonstrates how state-owned enterprises can act as pioneers in climate-conscious innovation, especially in developing country contexts. Their practices align with global goals such as the Paris Agreement and Indonesia's low-carbon development roadmap. Moreover, the company's inclusive approach—bringing together vendors, technology partners, and regulatory bodies—illustrates the value of collaborative governance in achieving climate goals.

Based on the study's insights, several recommendations are proposed. First, Pertamina should consider expanding the scope of Greenomina across all of its event formats, including small-scale and internal engagements, to build a consistent organizational culture of sustainability. Second, capacity-building programs and training sessions for vendors and event planners should be institutionalized to ensure widespread literacy in carbon management practices. Third, Pertamina could publish standardized sustainability toolkits and event templates based on Greenomina outputs to share best practices with other SOEs and private event organizers.

Future research can build on this study by comparing Pertamina's practices with similar initiatives in other industries or regions, applying mixed methods for greater generalizability, and evaluating the long-term behavioral impact of carbon-neutral events on stakeholders. As climate concerns intensify, research and practice in sustainable events will become increasingly vital to organizational legitimacy and environmental stewardship.

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